

**DECLARATION OF
JOSHUA HALSTEAD
ISO GOOGLE LLC'S
MOTION FOR
RELIEF RE
PRESERVATION**

**Redacted Version
of Document Sought
to be Sealed**

1 **UNITED STATES DISTRICT COURT**2 **NORTHERN DISTRICT OF CALIFORNIA, OAKLAND DIVISION**3 CHASOM BROWN, et al., on behalf of
4 themselves and all others similarly situated,

5 Plaintiffs,

Case No. 4:20-cv-03664-YGR-SVK

6 vs.

7 GOOGLE LLC,

8 Defendant.

9 PATRICK CALHOUN, et al., on behalf of
10 themselves and all others similarly situated,

11 Plaintiffs,

Case No. 4:20-cv-05146-YGR-SVK

12 vs.

13 GOOGLE LLC,

14 Defendant.

15 **DECLARATION OF JOSHUA HALSTEAD**

16 1. I am a Software Engineer employed by Google LLC. I have been employed at Google
17 since 2015, and I joined the [REDACTED] team at the beginning of this year. Recently, I became the lead of
18 the [REDACTED] team. In my capacity as Lead of the [REDACTED] team, I am responsible for supporting requests for
19 data from [REDACTED]. As part of my duties, I am familiar with the tools available at Google to access, search,
20 and store data in [REDACTED]. I make this declaration based on personal knowledge and information provided
21 to me by Google colleagues, and if called to testify, I could and would competently testify to such
22 facts.

23 2. I understand the Court issued preservation orders in the above-captioned cases
24 requiring that Google preserve data in GAIA [REDACTED], DBL [REDACTED], and ZWBK [REDACTED], among other data
25 sources. I understand the Court has ordered a daily “sample” preservation of data for 10,000 U.S.-
26 based users in GAIA [REDACTED], DBL [REDACTED], and ZWBK [REDACTED] for the *Calhoun* case, and in GAIA [REDACTED] and DBL
27 [REDACTED] for the *Brown* case.

1 3. To comply with the preservation orders, I, along with three other engineers, have
2 spent at least [REDACTED] hours designing, scoping, configuring, implementing, testing, optimizing,
3 debugging, and verifying the data preservation pipelines for GAIA [REDACTED] and DBL [REDACTED]. Once fully
4 implemented, those pipelines will require monitoring, maintenance, and debugging, which I
5 estimate will take at least [REDACTED] hours per week.

6 4. As of October 13, 2022, Google is storing approximately [REDACTED] of data in the
7 form of backups of GAIA [REDACTED] and DBL [REDACTED] in order to meet the Court's requirement to store data
8 back to July 30, 2022. Based on our work on the preservation pipelines so far, I anticipate that the
9 pipelines will store approximately [REDACTED] per day, on average.

10 5. We did not implement an ongoing daily sampling pipeline for ZWBK [REDACTED] because it
11 is no longer collecting data. There was no data in ZWBK [REDACTED] as of July 30, 2022.

12 6. We are also preserving four mapping tables that reside in [REDACTED]. Storing one snapshot
13 of the tables will take approximately [REDACTED], and will grow at the rate of approximately [REDACTED]
14 [REDACTED]/day.

15
16 I declare under penalty of perjury that the foregoing is true and correct.

17 Executed on the 19th day of October 2022 at Mountain View, California.

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By:

DocuSigned by:

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Joshua Halstead

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